

# State of Iowa - Return on Investment Program / IT Project Evaluation

## SECTION 1: PROPOSAL

Tracking Number (For Project Office Use)

Project Name: IDALS Electronic Commerce Date: 9/1/00

Agency Point of Contact for Project: Ron Hein

Agency Point of Contact Phone Number / E-mail: 281-8611

Executive Sponsor (Agency Director or Designee) Signature: \_\_\_\_\_

Is this project necessary for compliance with a Federal standard, initiative, or statute? (If "Yes," cite specific requirement, attach copy of requirement, and explain in Proposal Summary) ☒ Yes ☐ No

Is this project required by State statute? (If "Yes," explain in Proposal Summary) ☒ Yes ☐ No

Does this project meet a health, safety or security requirement? (If "Yes," explain in Proposal Summary) ☐ Yes ☒ No

Is this project necessary for compliance with an enterprise technology standard? (If "Yes," explain in Proposal Summary) ☒ Yes ☐ No

Does this project contribute to meeting a strategic goal of government? (If "Yes," explain in Proposal Summary) ☒ Yes ☐ No

Is this a "research and development" project? (If "Yes," explain in Proposal Summary) ☐ Yes ☒ No

### PROPOSAL SUMMARY:

In written detail, explain why the project is being undertaken and the results that are expected. This includes, but is not limited to, the following:

1. A pre-project (before implementation) and a post-project (after implementation) description of the system or process that will be impacted.

**Pre-Project Description:** IDALS (Iowa Department of Agriculture and Land Stewardship) has 27 legacy database systems that are used to maintain legislatively mandated licensing requirements. See the 'Data Elements' section for a description of these database systems. There are 28 databases listed in the 'Data Elements' section. The Organic database system is a new system that is already in phase 1 under 'Project Implementation' and is not included as a legacy system. These systems are sophisticated inter-related multi-user applications written in Clipper and FoxPro. They utilize DOS-based functions that are no longer supported. As IDALS user desktops are updated, the need to develop workarounds that allow these legacy systems to keep working increases. With Microsoft's introduction of Windows 2000 and Intel's planned introduction of the new Itanium processor, this trend will continue. The following paragraphs give a general description of the current state of our database

systems in the areas of field staff usage, the licensing process, availability of public information, security, and data integrity.

Only workstations physically located at the central office have access to these applications. Field staff has limited access to the information contained in these systems. They use printed lists or electronic copies of the data (updated monthly) to assist them when visiting regulated sites throughout Iowa. There is no direct means for field staff to update data on these databases. Any changes made must be on a central office workstation days or weeks after an individual inspector notes the change.

First time licensing of a citizen or business (applicant) involves: 1) The applicant must obtain a paper license application from IDALS, fill it out, and then mail it back to IDALS with appropriate fees. 2) Designated IDALS staff will review the application and enter the information into the corresponding database system. 3) All monies are sent to IDALS accounting staff for validation and deposit. 4) Other designated IDALS staff run daily or weekly programs to generate Licenses. 5) Licenses are mailed to the applicants.

License renewal for a citizen or business involves: 1) IDALS staff submit jobs to generate renewal applications from the database systems at designated times each year. 2) Designated staff prepare and send the renewal forms to the applicants. 3) The renewal forms are received back from the applicants with appropriate fees. 4) Specific IDALS bureau staff validates and enters the information into the corresponding legacy database system. 5) All monies are sent to IDALS accounting staff for validation and deposit. 6) Licenses, that are usually valid for a specified time frame, are mailed to the applicants.

To fulfill a public request for information from one of these databases the person has to: 1) Contact IDALS staff in the specific bureau area. 2) Fill out a request form. 3) Fax the request form to IDALS IT staff. 4) Wait for the information to be sent on a paper report, diskette or CD.

All of these database systems reside on a Netware LAN server. Central office IDALS staff access rights are controlled from each of these legacy systems. Each system allows browse, update, delete, run reports, and/or run special reports such as licenses, rights to be assigned to each central office employee as deemed necessary by IDALS management. Employee rights are only enforced when they are running the legacy applications. For example, an employee that is only authorized to browse a particular database can still go into My Computer and delete the entire production database. Individual database rights and file server rights are not tied together.

Each of these database systems is backed up to tape every night. If one of these on-line databases is corrupted during the day, it must be restored from the previous nights backup and then the activity that occurred since the backup must be re-keyed to get the database current again.

**Post Project Description:** All of IDALS major database systems will reside on two Microsoft SQL servers using state-of-the-art client/server technology. The following describes how each of the areas listed in the 'pre-project description' is proposed to change.

Direct live database access from the web will be possible. Authorized field staff will be able to get live information from any IDALS database while in the field and be able to change this data when needed. Central office staff will be able to see these updates as they occur (not weeks afterward).

'Manual' licensing would continue as described in the 'pre-project description', but electronic processing would be possible as described below.

First time licensing would involve: 1) The applicant would log in to the IDALS web site and bring up the appropriate on-line application, fill it out, and enter appropriate electronic payment information. 2) Designated IDALS staff will review the application and allow it to automatically update the database system. 3) Monies will be processed electronically and verified by IDALS accounting staff for electronic

deposit. 4) IDALS staff run daily or weekly programs to generate Licenses. 5) Licenses are mailed to the applicants.

License renewal would involve: 1) IDALS staff submit jobs to generate E-mail and/or hardcopy renewal notices from the database system at designated times each year. 2) The applicant would log in to the IDALS web site and bring up the appropriate renewal form, fill it out, and enter appropriate electronic payment information. 3) Designated IDALS staff will review the information and allow it to automatically update the database system. 4) Monies will be processed electronically and verified by IDALS accounting staff for electronic deposit. 6) Licenses are mailed to the applicants.

All public information authorized by the Secretary of Agriculture will be available on-line.

Database access rights will be linked to the file server access rights. When one denies access, they both deny access.

The database will be backed up throughout the day while it is in use.

2. A summary of the extent to which the project provides tangible and intangible benefits to either Iowa citizens or to State government. Included would be such items as qualifying for additional matching funds, improving the quality of life, reducing the government hassle factor, providing enhanced services, improving work processes, complying with enterprise technology standards, meeting a strategic goal, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, complying with federal or state laws, etc.

**Benefits:** The main beneficiary of this project will be the general public. The public gains the general benefits of the use of e-commerce. These benefits are both tangible and intangible. The tangible benefits for the public include faster processing of applications and immediate access to public and private (with appropriate safeguards) information. The public will also gain a positive impression of their State government through the use of state-of-the-art communications and by their government being more efficient and accessible. This project will aid the Department in moving towards the Governor's goal of connecting rural Iowans to their government.

IDALS will benefit through the use of automation. This project is a step toward a paperless government. Processing by hand will become out-dated. Eliminating the physical aspects of processing (mailing, carrying, sorting, data-entry, storage) will decrease processing time and increase efficiency, allowing staff to concentrate their efforts in other areas. Also, having on-line database access for field staff keeps the whole department up-to-date, which is important from a regulatory standpoint. An inspectors findings can be entered and acted upon immediately. With others in the department having this information immediately, fewer errors will occur.

Both the public and the Department benefit by not having to support legacy database systems. As the supported technology gets further out-of-date, it gets more difficult to continue to keep the software working as designed. There will come a time when the department will no longer be able to support both new and old technology. Supporting each requires specific skill sets. New and old technologies have different requirements to operate. The problem will come when either the skill sets disappear and/or the requirements of the differing technologies come into conflict. The system will break and there will be no one to fix it. Everyone benefits if this situation can be avoided.

3. A summary that identifies the project stakeholders and how they are impacted by the project.

The main project stakeholders are the citizens of Iowa, central office IDALS staff, and field staff for IDALS. After this project is completed it will be easier for the public to do business with the State of Iowa. The public will be able to apply for and renew licenses maintained by IDALS using any standard web browser. Field office and traveling central office staff will be able to access and update authorized data using any standard web browser.

## **SECTION 2: PROJECT PLAN**

Individual project plans will vary depending upon the size and complexity of the project. A project plan includes the following information:

### **1. Agency Information**

**Project Executive Sponsor Responsibilities:** Identify, in Section I, the executive who is the sponsor of the project. The sponsor must have the authority to ensure that adequate resources are available for the entire project, that there is commitment and support for the project, and that the organization will achieve successful project implementation.

License issuance is mandated of IDALS in several areas of the Code. The executive sponsor, Secretary Patty Judge is committed to the Department meeting Code mandates and serving Iowans in the most effective and efficient means possible. She is also committed to using the IT Resources that would be allocated for this project as detailed in this proposal.

**Organization Skills:** Identify the skills that are necessary for successful project implementation. Identify which of these skills are available within the agency and the source(s) and acquisition plan for the skills that are lacking.

Existing IDALS IT staff will oversee the contractors necessary to implement this project. Existing IDALS IT staff will be responsible for maintaining these systems as legislative and internal needs change. Contractor(s) will be responsible for the bulk of the database conversion to this e-commerce platform. Contractor expertise will be used for SQL/Web integration, e-money/payment technology, authentication querying, and use of the newly developed software.

### **2. Project Information**

**Mission, Goals, Objectives:** The project plan should clearly demonstrate that the project has developed from an idea to a detailed plan of action. The project plan must link the project to an agency's mission, goals, and objectives and define project objectives and how they will be reached. The project plan should include the following:

- A. **Expectations:** A description of the purpose or reason that the effort is being undertaken and the results that are anticipated.

The purpose of this project is to help connect Iowan's with their government. As web usage in general and as awareness of these systems increases, use will become more widespread. It is expected that the total time spent processing licenses will decrease.

- B. **Measures:** A description of the set of beliefs, tradeoffs and philosophies that govern the results of the project and their attainment. How is the project to be judged or valued? What criteria will be used to determine if the project is successful? What happens if the project fails?

It is believed that businesses and individuals will want to apply for and renew licenses over the web. This has been true for larger corporations for some time. They are already automated, so an interface capable of accepting their electronic data would reduce their reporting burden. It is

also believed that as time goes by and use of the internet increases, fewer total staff-hours will be needed to process licensees.

- C. **Environment:** Who will provide input (e.g., businesses, other agencies, citizens) into the development of the solution? Are others creating similar or related projects? Are there cooperation opportunities?

Selected citizens and IDALS field staff will have the opportunity to use these systems before they go into production. The production 'public access' phase for each database will be initiated only after these test groups are satisfied with the 'public access' interface. The interface will also need to conform to state ITD standards.

- D. **Project Management and Risk Mitigation:** A description of how you plan to manage the project budget, project scope, vendors, contracts and business process change (if applicable). Describe how you plan to mitigate project risk.

Monthly meetings with IDALS IT staff, IDALS management and project contractors will be needed to assure that the project is progressing as expected. Regular meetings with ITD staff will also be needed to assure that the project is conforming to State of Iowa enterprise standards. Database conversion costs from our current legacy platform to Microsoft SQL server with e-commerce is based on our past database conversions using a contractor. Three contractors were contacted to obtain database conversion costs. Advanced Technology Group in West Des Moines has reviewed the hardware and software requirements presented in this document. They have already implemented this solution with other clients.

- E. **Security / Data Integrity / Data Accuracy / Information Privacy:** A description of the security requirements of the project? How will these requirements be integrated into the project and tested. What measures will be taken to insure data integrity, data accuracy and information privacy?

Multiple security audits will be completed when these systems are made available on the web. Security audits will be performed by IDALS IT staff and by a separate contractor. (The contractor performing the audit must not be a contractor that is involved with the implementation of this project.) We will also ask ITD to perform a security audit in conjunction with our implementation of the State of Iowa's PKI standards. It will be essential that we maintain the confidentiality of non-public information.

### 3. **Current Technology Environment (Describe the following):**

#### A. **Software (Client Side / Server Side / Midrange / Mainframe)**

- Application software
- Operating system software
- Interfaces to other systems: Identify important or major interfaces to internal and external systems.

#### Software:

Application software – CA Clipper 5.2, MS FoxPro 2.6 & 3.0

OS software – Client: Windows 95. Server: Netware 5.0, NT 4.0

Interfaces – Internal tables maintained by one application are referenced in other internal applications.

## B. Hardware (Client Side / Server Side / Mid-range / Mainframe):

- Platform, operating system, storage and physical environmental requirements.
- Connectivity and Bandwidth: If applicable, describe logical and physical connectivity.
- Interfaces to other systems: Identify important or major interfaces to internal and external systems.

### Hardware:

Compaq Proliant 3000 – Netware 5.0	68 GB
Compaq Proliant 2500 – Microsoft IIS	17 GB
Compaq Proliant 1500 – Microsoft Exchange 5.0	6 GB

Servers are connected by 100MB Ethernet. Workstations have a 10MB connection.

We have a 10 MB connection to the State ATM backbone.

## 4. Proposed Environment (Describe the following):

### A. Software (Client Side / Server side / Mid-range / Mainframe)

- Application software.
- Operating system software.
- Interfaces to other systems: Identify important or major interfaces to internal and external systems.
- General parameters if specific parameters are unknown or to be determined.

### Software:

Application development software –MS Visual Studio.NET

OS software – Client: Windows 2000 Professional. Server: Windows 2000 server, Microsoft SQL Server 2000, Microsoft MTS (com+) server, MS IIS Server, MS Exchange 2000 Server, and Netware 5.2.

Interfaces – Internal tables maintained by one application are referenced in other internal applications. An interface to the States ITD PKI system will be used to provide application security. Electronic payment systems/EFT will be used to handle money transfers. Three Microsoft SQL servers will be used for this project. One SQL server will be used as a test box. One SQL server will be located on-site and serve all central office database functions. One SQL server will be placed off-site at a web hosting facility. The off-site SQL server will serve all public and field office database functions. Replication will be used between the on-site and off-site SQL servers to maintain database integrity. An off-site MTS server(s) installed on a web host IIS server(s) will load-balance requests to the off-site SQL server. Advanced Technology Group in West Des Moines has reviewed the hardware and software requirements presented in this document. They have already implemented this solution with other clients.

### B. Hardware (Client Side / Server Side / Mid-range / Mainframe)

- Platform, operating system, storage and physical environmental requirements.
- Connectivity and Bandwidth: If applicable, describe logical and physical connectivity.



- Interfaces to other systems: Identify important or major interfaces to internal and external systems.
- General parameters if specific parameters are unknown or to be determined.

#### Hardware:

The hardware specified here is what would be used if the project were implemented today. At least three new Compaq file servers will need to be purchased when this project is rolled out. State of the art Compaq file servers will be purchased instead of what is listed here. Each server will have a minimum of 1 gb. memory, 68 gb. drive space using a hot-swap raid 5 configuration, and dual state of the art processors.

Compaq Proliant ML350 – Windows 2000 server, Microsoft SQL 2000. (Provides local IDALS database access.)

Compaq Proliant ML350 – Windows 2000 server, Microsoft SQL 2000. (Provides public/field office database access.)

Compaq Proliant ML350 – Netware 5.2.

Compaq Proliant ML350 – Windows 2000 server, Microsoft IIS Intranet server, Microsoft Transaction Server.

Compaq Proliant ML350 – Windows 2000 server, Microsoft IIS Internet server, Microsoft Transaction Server.

Compaq Proliant ML350 – Windows 2000 server, Exchange 2000.

Local servers will be connected to a 100MB switched Ethernet ports. Local workstations will be connected to switched 10MB ports. Off-site and on-site servers will be connected using a 10MB ICN circuit.

**Data Elements:** If the project creates a new database the project plan should include the specific software involved and a general description of the data elements.

### FERTILIZER DATABASE SYSTEMS

#### Fertilizer Name & Address

The primary function of the Fertilizer Name & Address database system is to store data on all in-state and out-of-state dealers licensed to sell fertilizer products in Iowa. The system keeps track of the type of business (farmer, animal nutrient, commercial, specialty retail, specialty applicator, or specialty manufacturer), the type of fertilizer sold (anhydrous, bagged, bulk, or liquid), whether the dealer is a containment facility, licensing fees and dates, tonnage tax dates and tons sold, and sampling information. It generates new licenses, license renewal forms, delinquent renewal forms, tonnage tax forms, delinquent tonnage tax forms, public request data listings, sample date listings, quarterly out of state listings, and various other generic reports. At present there are 3,124 companies.

#### Fertilizer Mail List

The chief role of the Fertilizer Mail List database system is to store mailing addresses on universities, government agencies, corporations, individuals, etc... who receive special fertilizer mailings. The system generates mailing labels and listings. At present there are 262 mail records.

#### Fertilizer Small Products

The main purpose of the Fertilizer Small Products database system is to store data on all of the fertilizer small products (25 lbs. or less) sold in Iowa. The system keeps track of the fertilizer dealer selling the product, the product name, the grade content (nitrogen, phosphorous, potassium, and micronutrient), total tonnage, and product renewal year. The system generates

registration and inspection fee forms, ground water protection fee reports, delinquent small product reports and labels, and various other generic reports. At present there are 1,326 small product records. This database system uses the Fertilizer name and address tables.

#### Fertilizer Anhydrous

The primary function of the Fertilizer Anhydrous database system is to keep track of all fertilizer anhydrous tanks and nurse tanks in the state of Iowa. The system keeps track of the fertilizer dealer owning the tank and the last inspection of the tank (inspection date, inspector, results, and capacity). The system generates various generic reports. At present there are 1,351 anhydrous and nurse tanks in this system. This database system uses the Fertilizer name and address tables.

#### Fertilizer Containment

The major objective of the Fertilizer Containment database system is to keep track of all of the fertilizer containment facilities licensed in Iowa. The system keeps track of the fertilizer dealer where the containment facility is located and the facilities certificate of completion and inspection information (containment plan received date, certification of completion sent and received dates, and original owner information). The system generates fertilizer containment data listings and certification of completion letters. At present there are 1,378 containment facilities in this system. This database system uses the Fertilizer name and address tables.

#### Fertilizer Aglime

The main purpose of the Fertilizer limestone database system is to store data on all fertilizer limestone companies licensed in Iowa. The system keeps track of the fertilizer company selling limestone, the company's quarries (quarry name, quarry location, and quarry expiration year), the quarry's piles of limestone (pile name, pile certification dates and values, and pile expiration year), and the pile's samples (sample date and number, inspection date and inspector number, certification date and value, pile contents (CACO, moisture, mesh4, mesh8, mesh60, fineness, and per lime), and billing information). It generates new licenses, license renewal forms, certification notices, de-certification notices, billings for samples taken, a quarterly recapitulation report, and various other generic reports. At present there are 94 companies, 382 quarries, 515 piles, and 4,116 pile samples in this system.

#### Fertilizer Audit

The main purpose of the Fertilizer Audit database system is to record fertilizer inspection fee (a.k.a. net tonnage tax) and groundwater protection fee audits. The system keeps track of the fertilizer dealer, year and period of the audit, tonnage (tons sold, exempt tons, and net tons), inspection fees, inspection penalties, the fertilizer grade content (nitrogen, phosphorous, potassium, and micronutrient), exempt purchases from and exempt tons sold to company information, and groundwater fees. The system generates inspection fee reports, groundwater protection fee reports, total tons NPK reports, fee due and refund letters, recap reports, exemption error reports, and various other generic reports. At present there are 5,201 audits with 52,147 audit detail records. This database system uses the Fertilizer name and address tables.

#### Fertilizer Analysis

The primary function of the Fertilizer Analysis database system is to record the laboratory analysis results of the ingredients of the various agricultural fertilizer products sold in Iowa. For each fertilizer product sampled the system keeps track of the fertilizer dealer where the sample was taken, sample information (sample number and date), inspector number, lab information (lab number and date), fertilizer type, and grade contents (nitrogen, phosphorous, potassium, and micronutrient). The system generates a semi-annual publication of the results. At present there are 6,189 lab analysis records in this system. This database system uses the Fertilizer name and address tables.



### Fertilizer Distribution

The main purpose of the Fertilizer Distribution database system is to store county-by-county information on the tonnage of various agricultural fertilizer products distributed in Iowa. For each fertilizer product type, the system keeps track of the total tonnage by county. The system generates a semi-annual publication of the results for the most common fertilizers. At present there are 13,046 county sheet records in this system. This database system uses the Fertilizer name and address tables.

## FEED DATABASE SYSTEMS

### Feed Name & Address

The primary function of the Feed Name & Address database system is to store data on all in-state and out-of-state dealers licensed to sell feed products in Iowa. The system keeps track of the type of business (broker, custom, distributor, or manufacturer), the type of feed sold (pet, taxed, or medicated feed), licensing fees and dates, tonnage tax dates, and sampling information. It generates new licenses, license renewal forms, delinquent renewal forms, semi-annual tonnage tax forms, delinquent tonnage tax forms, public request data listings, and various other generic reports. At present there are 2,131 Feed companies in this system.

### Feed Small Products

The main purpose of the Feed Small Products database system is to store data on all of the feed small products (pet food 10 lbs. or less) sold in Iowa. The system keeps track of the feed dealer selling the product, the product name, total tonnage, and product renewal year. The system generates annual product registration forms, delinquent small product reports and labels, and various other generic reports. At present there 3,617 feed small product records in this system. This database system uses the Feed name and address tables.

### Feed Analysis

The primary function of the Feed Analysis database system is to record the laboratory analysis results of the ingredients of the various agricultural feed products sold in Iowa. For each feed product sampled, the system keeps track of the feed dealer where the sample was taken, the guarantor, sample information (sample number and date), inspector number, lab information (lab number, dates, and results), feed type (bag, bulk, custom, pet, meal, or pellet), and field action (in-tolerance, out-of-tolerance, issue notice, withdraw, or resample). The system generates a semi-annual publication of the results and various other generic reports. At present there are 11,931 lab analysis records in this system. This database system uses the Feed name and address tables.

### Feed Audit

The main purpose of the Feed Audit database system is to record feed inspection fee audits (a.k.a. net tonnage tax). The system keeps track of the feed dealer, year and period of the audit, inspection fees, inspection penalties, the feed product code, exempt purchases from and exempt tons sold to company information, and tonnage (tons sold, exempt tons, and net tons). The system generates inspection fee reports, fee due and refund letters, recap reports, exemption error reports, and various other generic reports. At present there are 6,727 audits with 34,151 audit detail records in this system. This database system uses the Feed name and address tables.

### Medicated Feed

The major objective of the Medicated Feed database system is to log inspections on companies that sell medicated feed in Iowa. The system keeps track of the feed dealer, inspection date and inspector number, violations (lack of records, unapproved drugs, cross contamination, inadequate labeling), actions taken (letter written, follow up, or tissue residue), and other inspection findings. The system generates various generic reports. At present there are 2,791

medicated feed inspection records in this system. This database system uses the Feed name and address tables.

## **PESTICIDE DATABASE SYSTEMS**

### **Pesticide Name & Address**

The primary function of the Pesticide Name & Address database system is to store data on all in-state and out-of-state dealers licensed to sell restricted use pesticide products in Iowa. The system keeps track of the type of business (government, manufacturer, restricted, and other), fee information (gross sales, penalties, and fees), and licensing dates. It generates new licenses, license renewal forms, delinquent renewal forms, public request data listings, and various other generic reports. At present there are 2,973 pesticide dealer records in this system.

### **Pesticide Private Applicator**

The major objective of the Pesticide Private Applicator database system is to keep track of all of the people who are certified to buy and apply restricted use pesticides in Iowa. The system stores the private applicator's address, certification dates, and training dates (regular and fumigant). The system generates pesticide private applicator certificates, training summary reports, public request data listings, and numerous generic reports. At present there are 45,650 private applicator records in this system.

### **Pesticide Commercial Applicator**

The main function of the Pesticide Commercial Applicator database system is to keep track of all in-state and out-of-state licensed companies and their certified applicators that apply restricted use pesticides in Iowa. The system stores the company address, company license type, company containment type, company insurance date, company fee and penalty paid, company license dates, applicator name, applicator social security number, applicator certification dates, applicator expiration dates, applicator testing information (category types and test dates), and commercial company and applicator violations. . It generates new licenses, license renewal forms, delinquent renewal forms, pesticide applicator cards, pesticide handler cards, public request data listings, and various other generic reports. At present there are 4,939 commercial applicator companies with 23,484 certified applicators in this system.

### **Pesticide Registrant**

The main purpose of the Pesticide Registrant database system is to store data on all of the pesticide products registered for sale and distribution in Iowa. The system keeps track of the product trade name, EPA registration number and name, company data, past year sales, fee and penalty paid, registration dates, registration codes, designation codes, and active ingredients. The system generates annual registration renewal forms, registration renewal receipts, and various other generic reports. At present there are 1,686 registrant companies with 18,090 registered products. This system uses EPA product and EPA active ingredient tables.

### **Pesticide Sales**

The main purpose of the Pesticide Sales database system is to record all pesticide sales reported in Iowa. The system keeps track of the pesticide dealer, the product EPA name and number, active ingredients, quantity, usage type (corn, soybean, forage, lawn, small grain, livestock, and other), and dollar amounts. The system generates various generic reports. At present there are 253,902 pesticide sales and 937 conversion records in this system. This system uses the pesticide name and address tables, an EPA product table, and an EPA active ingredient table. Iowa State University calculates and supplies us with conversion factors used in this system. The Iowa DNR produces GIS information using the information in this system.

### **Pesticide Residue**

The primary function of the Pesticide Residue database system is to record the laboratory analysis results of pesticide residue samples taken in Iowa. The system logs where the sample

was collected, the applicator who applied the pesticide, the person making the complaint, the inspector who collected the sample, lab year and number, and sample information (sample number, type (soil, water, feed, etc...), description, collected and received dates, case reference number, and EPA data). The system outputs analysis reports and several generic reports. There are 1,281 residue samples, 3,984 active ingredient, 510 EPA ingredient, and 1,392 pesticide common name records in this system.

## OTHER DATABASE SYSTEMS

### Fixed Asset Inventory

The chief role of the Fixed Asset Inventory database system is to log the department of agriculture's fixed assets. The system keeps track of the state tag number, fixed asset status, deletion date, transfer data, inventory item (description, model no., serial no.), purchase order number, vendor, acquisition value, location, and user information (name, fund, agency, and organization). The system produces reconciliation reports, physical inventory listings, fixed asset purchasing reports, fixed asset transfer reports, and other generic reports. This system keeps track of 5,379 inventory items.

### Accounting Validation

The main purpose of the Accounting Validation database system is to track and validate the paper flow for the numerous fees received by the department of agriculture. The system logs the data entered (date, account type, and check amount), runs validation checks, prints validation codes on the checks and related documents, and calculates daily totals. It outputs monthly account summaries, validation transmittal letter receipts, and validation transmittal letters of deposit. This system processes more than 90,000 validation fee receipts annually.

### Animal Industry Licensing

The primary function of the Animal Industry Licensing database system is to store data on all licensed animal industry dealers in Iowa. The system keeps track of the licensed dealer information (address, license type and number, fees paid, classification codes, and licensing dates), veterinarians (federal, state, and coop), and veterinarian inspections of the dealers (inspection code, date, and comments). It generates new licenses, license renewal forms, delinquent renewal forms, and various other generic reports. This system has 3,473 animal industry dealers with 5,579 inspections.

### Veterinarian Vaccination Payment

The major purpose of the Veterinarian Vaccination Payment database system is to record the tuberculosis and brucellosis vaccination payments made to private veterinarians. The system keeps track of the veterinarian's address and ticket information (ticket number, vaccination date, type of vaccination, number of animals vaccinated, tag or tattoo numbers, and payment amount). The system produces monthly vet billing vouchers and several generic reports. This system has 336 clinics, 1,612 veterinarians, 215,698 tickets, and 350,986 tag/tattoo records.

### Horse Racing

The main purpose of the Horse Racing database system is to generate horse breeder awards. The system keeps track of all registered horses (mares, stallions, and foals), owners, and breeders involved in the Iowa Horse Breeding program. This information is used to calculate breeder awards. The system generates breeder awards, brood mare status reports, breeder and owner listings, horse registration listings, mare and stallion inspection reports, horse location reports, and other various generic reports. There are 2,350 owner/breeder, 10,600 horse, 11,895 horse inspection, 9,432 horse transfer, 1,341 breeder award, and 8,890 horse mare status records in this system.

### Dog Racing

The main purpose of the Dog Racing database system is to generate dog breeder awards. The system keeps track of all registered dogs (dams, litters, and individuals), owners, breeders, and kennels involved in the Iowa Dog Breeding program and calculates breeder awards. The system generates breeder awards, breeder and owner listings, litter and individual registration listings and other various generic reports. There are 2,350 owner/breeder, 19,527 dog, 4,053 dog inspection, and 13,335 breeder award records in this system.

### Corn and Soybean Check off

The main purpose of the Corn and Soybean Check off Audit database system is to record corn and soybean company audits. The system keeps track of the corn and/or soybean company information, audit session dates and times, corn audit sheets, soybean audit sheets, and check payments. The system produces monthly corn and soybean audit reports, corn and soybean crop year reports, field auditor activity reports, and numerous generic reports. There are about 500 yearly audit records each year in this system.

### Organic Database system

This system is used to certify organic produce under the State of Iowa seal. This system is a new system being developed with Microsoft Visual Studio 6 with data on a Microsoft SQL Server 7. Organic producers and processors are kept track of with this system. Certifications, transaction certificates, and crop movement is kept track of for each producer/processor. This system will have about 25 inter-related tables.

**Project Schedule:** A schedule that includes: time lines, resources, tasks, checkpoints, deliverables and responsible parties.

**Project Implementation:** This project is estimated to take three years to complete. This is an aggressive timeline that assumes adequate resources for each phase. The timeline would start when the phase 1 resources are supplied. IDALS IT staff will be responsible for the implementation details. Implementation details include: overseeing the contract programmers, frequent meetings with IDALS staff and citizens to verify project expectations, and giving reports to IDALS management as the project evolves.

The technology in this arena is changing fast and the implementation details will need to be reviewed and revised at least once a year for this three-year project. Each database system will be in a different phase until the project is complete. For example, we will try to run one database system through all of the phases while other database systems are still in phase 1.

Phase 1) Convert the legacy database systems to Microsoft SQL server. The applications will be COM+ based so that a Microsoft transaction server can mitigate them in later phases. The database platform conversion to client/server is the most expensive and least risky phase. Approximately 50% of the project money will be consumed in this phase. Most of this 50% will be for contract programming. This phase has the least amount of risk because our databases must be moved off of our legacy platform to a client/server platform anyway. Existing IDALS staff is putting blank first-time license applications on the web for public access as part of this phase. Upgrading our Exchange server from 5.0 to Exchange 2000 is also expected to occur during this phase.

Phase 2) Dump copies of public approved data directly to the IDALS web server using DTS packages on our Microsoft SQL server. These will be text file dumps with limited search capabilities. Update desktops from Windows 95 with Office 97 to Windows 2000 professional with Office 2000. Install SQL 2000 test and production servers on new boxes. This phase has

little risk and is expected to consume approximately 10% of the project money. Most of the money will be used for upgrading software and hardware.

Phase 3) Grant public and field office real time view-only access to public data. Use one-way replication to copy data from the production SQL server to the web SQL server. Implement MTS with COM+ components. This will add a layer of security and facilitate connection pooling which allows the web SQL server to support more clients. A security audit will need to be completed by an external private company at the end of this phase. This phase has some risk and is expected to consume approximately 15% of the project money.

Phase 4) Grant field office staff with live update access to approved restricted data. PKI and enterprise security standards will need to be implemented during this phase. We will need to evaluate the physical locations of our SQL, Exchange, MTS and Web servers at this time. 2-way SQL server replication will need to be implemented. A security audit will need to be completed by an external private company at the end of this phase. This phase has high risk and is expected to consume approximately 15% of the project money.

Phase 5) Grant public access to restricted data. Applicants will be able to renew licenses that are issued by IDALS. A security audit will need to be completed by an external private company at the end of this phase. This phase has high risk and is expected to consume approximately 10% of the project money. Most of this money will be spent on security and the fine-tuning of our public interface. The IDALS public interface will need to be integrated into the State of Iowa's public interface so that it is intuitive for the citizens of Iowa. Most of the infrastructure changes needed to allow public electronic commerce were completed in earlier phases.



## SECTION 3: Return On Investment (ROI) Financial Analysis

### Project Budget:

Provide the estimated project cost by expense category.

Personnel .....	\$ _____
Software .....	\$ 53,013 _____
Hardware .....	\$ 30,000 _____
Training .....	\$ _____
Facilities .....	\$ _____
Professional Services .....	\$1,527,240 _____
Supplies .....	\$ _____
Other (Specify) .....	\$ _____
Total .....	\$1,610,253 _____

### Project Funding:

Provide the estimated project cost by funding source.

State Funds .....	\$ 1,610,253 _____	100 _____	% of total cost
Federal Funds .....	\$ _____	_____	% of total cost
Local Gov. Funds .....	\$ _____	_____	% of total cost
Private Funds .....	\$ _____	_____	% of total cost
Other Funds (Specify) .....	\$ _____	_____	% of total cost
Total Cost: .....	\$ _____	_____	% of total cost

Provide the estimated project cost by fiscal year: FY\_2002\_ \$ 1,610,253 \_\_\_\_\_

FY \_\_\_\_\_ \$ \_\_\_\_\_

FY \_\_\_\_\_ \$ \_\_\_\_\_

How much of the cost would be incurred by your agency from normal operating budgets (staff, equipment, etc.)? ..... \$0 \_\_\_\_\_ 0%

How much of the cost would be paid by "requested IT project funding"? .. \$ 1,610,253 \_\_\_\_\_ 100\_%

Identify, list, and quantify all additional annual maintenance expenses (State \$\$) related to the project.

None known.

Identify, list, and quantify any other future additional expenses (State \$s) related to the project.

Annually: \$12,000 for a line between ATG and IDALS and \$7,000 for independent security audits.

## **ROI Financial Worksheet Directions (Attach Written Detail as Requested):**

**Annual Pre-Project Cost** -- Quantify, in written detail, all actual State government direct and indirect costs (personnel, support, equipment, etc.) associated with the activity, system or process prior to project implementation. This section should be completed only if State government costs are expected to be reduced as a result of project implementation.

**Annual Post-Project Cost** -- Quantify, in written detail, all estimated State government direct and indirect costs associated with activity, system or process after project implementation. This section should be completed only if State government costs are expected to be reduced as a result of project implementation.

**State Government Benefit** -- Subtract the total "Annual Post-Project Cost" from the total "Annual Pre-Project Cost." This section should be completed only if State government costs are expected to be reduced as a result of project implementation.

**Citizen Benefit** -- Quantify, in written detail, the estimated annual value of the project to Iowa citizens. This includes the "hard cost" value of avoiding expenses (hidden taxes) related to conducting business with State government. These expenses may be of a personal or business nature. They could be related to transportation, the time expended on or waiting for the manual processing of governmental paperwork such as licenses or applications, taking time off work, mailing, or other similar expenses.

**Opportunity Value/Risk or Loss Avoidance Benefit** -- Quantify, in written detail, the estimated annual benefit to Iowa citizens or to State government. This could include such items as qualifying for additional matching funds, avoiding the loss of matching funds, avoiding program penalties/sanctions or interest charges, avoiding risks to health/security/safety, avoiding the consequences of not complying with State or federal laws, providing enhanced services, avoiding the consequences of not complying with enterprise technology standards, etc.

**Total Annual Project Benefit** -- Add the values of all annual benefit categories.

**Total Annual Project Cost** -- Quantify, in written detail, the estimated annual new cost necessary to implement and maintain the project including consulting fees, equipment retirement, ongoing expenses (i.e. labor, etc.), other technology (hardware, software and development), and any other specifically identifiable project related expense. In general, to calculate the annual hardware cost, divide the hardware and associated costs by three (3), the useful life. In general, to calculate the annual software cost, divide the software and associated costs by four (4), the useful life. This may require assigning consulting fees to hardware cost or to software cost. A different useful life may be used if it can be documented.

**Benefit / Cost Ratio** -- Divide the "Total Annual Project Benefit" by the "Total Annual Project Cost." If the resulting figure is greater than one (1.00), then the annual project benefits exceed the annual project cost. If the resulting figure is less than one (1.00), then the annual project benefits are less than the annual project cost.

**ROI** -- Subtract the "Total Annual Project Cost" from the "Total Annual Project Benefit" and divide by the amount of the requested State IT project funds.

**Benefits Not Cost Related or Quantifiable** -- List the project benefits and articulate, in written detail, why they (IT innovation, unique system application, utilization of new technology, hidden

taxes, improving the quality of life, reducing the government hassle factor, meeting a strategic goal, etc.) are not cost related or quantifiable. Rate the importance of these benefits on a “1 – 10” basis, with “10” being of highest importance. Check the “Benefits Not Cost Related or Quantifiable” box in the applicable row.

## ROI Financial Worksheet

### Annual Pre-Project Cost - How You Perform The Function(s) Now

FTE Cost (salary plus benefits):	1,693,164
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	125,307
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	
<b>A. Total Annual Pre-Project Cost:</b>	<b>1,818,471</b>

### Annual Post-Project Cost – How You Propose to Perform the Function(s)

FTE Cost:	925,951
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	110,441
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	
<b>B. Total Annual Post-Project Cost:</b>	<b>1,036,392</b>
<b>State Government Benefit ( = A-B ):</b>	<b>782,079</b>

### Annual Benefit Summary

State Government Benefit:	782,079
Citizen Benefit (including quantifiable “hidden taxes”):	421,857
Opportunity Value and Risk/Loss Avoidance Benefit:	
<b>C. Total Annual Project Benefit:</b>	<b>1,203,936</b>
<b>D. Total Annual Project Cost:</b>	<b>405,063</b>
<b>Benefit / Cost Ratio (C / D):</b>	<b>_2.97_</b>
<b>ROI (C – D / Project Funds Requested):</b>	<b>_49.61%</b>

☐ Benefits Not Cost Related or Quantifiable (including non-quantifiable “hidden taxes”)

### Section 3: IDALS Ecommerce FY02 Funding Request Supporting Financial Information Worksheet

<u>Pre Project Costs</u>	<u>Description</u>	<u>Post Project Costs</u>
722,818.00	Administrative Staff	244,196.70
737,713.80	Field Staff	614,938.27
197,757.00	ITS 3, 4, 5	66,816.00
<u>34,875.00</u>	Other Support Positions	<u>0.00</u>
<b>\$1,693,163.80 FTE Subtotal</b>		<b>\$925,950.97</b>
30,449.50	Equipment Depreciation	10,998.43
38,355.31	Ag Stats Operational Budget	38,355.31
0.00	ATG Line from IDALS	12,000.00
0.00	Independent Security Audits	7,000.00
42,820.00	PC Depreciation	17,128.00
3,682.65	Software	14,958.94
<u>10,000.00</u>	Training	<u>10,000.00</u>
<b>\$125,307.46 Support Subtotal</b>		<b>\$110,440.68</b>
<b>\$1,818,471.26 Grand Total</b>		<b>\$1,036,391.65</b>
State Government Benefit		782,079.60
Citizen Benefit		421,857.00
Opportunity Value		
<b>Total Annual Project Benefit</b>		<b>\$1,203,936.60</b>
<b>Total Annual Project Cost</b>		<b>405,063.00</b>
<b>Benefit/Cost Ratio</b>		<b>2.97</b>
<b>ROI</b>		<b>49.61%</b>